SIDDHANT GARG

Bay Area, California

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Google Scholar • Semantic Scholar

WORK EXPERIENCE

Amazon Alexa AI | Applied Scientist   **Jun 2020 – Present**
Question understanding models for improving efficiency of Alexa's open-domain QA system. Answer ranking and generation QA models as part of a web question answering pipeline for Alexa. Supervised 2 research intern projects.

Amazon Alexa AI | Applied Scientist Intern | Advisor: Alessandro Moschitti   **Jun 2019 – Sep 2019**
Sequential transformer fine-tuning techniques for answer selection via a new large noise-free dataset (ASNQ). Results on WikiQA & TrecQA beating previous SOTA by ∼10% rel. Research paper accepted at AAAI '20 (Oral).

SELECTED FIRST-AUTHOR PUBLICATIONS

- **Will this Question be Answered? Question Filtering via Answer Model Distillation for Efficient QA**
  Siddhant Garg, Alessandro Moschitti • [Paper] [Slides] [Poster]   **EMNLP 2021(Oral)**
- **TANDA: Transfer and Adapt Pre-Trained Transformer Models for Answer Sentence Selection**
  Siddhant Garg, Thuy Vu, Alessandro Moschitti • [Paper] [Code] [Blog] [Slides]   **AAAI 2020(Oral)**
- **BAE: BERT-based Adversarial Examples for Text Classification**
  Siddhant Garg*, Goutham Ramakrishnan* • [Paper] [Code] [Blog] [Slides] [Video]   **EMNLP 2020**
- **Surprisingly Easy Hard-Attention for Sequence to Sequence Learning**
  Shiv Shankar*, *Siddhant Garg**, Sunita Sarawagi • [Paper] [Code] [Slides] [Video]   **EMNLP 2018(Oral)**
- **Functional Regularization for Representation Learning: A Unified Theoretical Perspective**
  Siddhant Garg, Yingyu Liang • [Paper] [Code] [Slides] [Video]   **NeurIPS 2020**

EDUCATION

University of Wisconsin Madison   **Aug 2018 – May 2020**
MS (Thesis) Computer Science • CGPA: 3.96/4.0 • Advisor: Prof. Yingyu Liang   *Madison, WI, USA*
Thesis: Understanding Representation Learning Paradigms with Applications to Low Resource Text Classification [Report]

Indian Institute of Technology (IIT) Bombay   **Jul 2014 – May 2018**
B.Tech. Computer Science & Engineering • CGPA: 9.59/10.0 • Advisor: Prof. Sunita Sarawagi   *Mumbai, MH, India*
Thesis: Structured Attention Sequence to Sequence Models [Slides]

ACADEMIC SERVICES AND AWARDS

Conference & Journal Reviewer: EMNLP '19 '20 (**Outstanding Reviewer**) '21, ACL '20 '21 (**Outstanding Reviewer**), NAACL '21, NeurIPS '20 (**Top 10% of Reviewers**) '21, ICML '21 (**Top 10% of Reviewers**), ICLR '22, AAAI '20 '21, ACL Rolling Review (Nov'21 - Mar'22), SIGIR '21, ESANN '20, JAIR, IEEE TNNLS

Teaching Assistant: Artificial Intelligence (CS540) Fall'18, Computer Programming(CS101) Spring'18, Computer Architecture (CS305) Fall'17, Data Analysis and Interpretation(CS215) Fall'16

Scholarships: Awarded Graduate Scholarship '18 at UW Madison (Top 2%), KVPY Fellowship - Dept. of Science & Technology Govt. of India '13, NTSE Scholarship - Dept. of Science & Technology Govt. of India '10

Achievements: All India Rank 9 in KVPY '13 among 3 lakh candidates, All India Rank 191 in JEE Advance '14 among 1.5 lakh selected candidates, Best Social Impact Project at Tech and RnD Expo IIT Bombay '15.

OTHER PEER-REVIEWED FIRST-AUTHOR PAPERS

- Towards Robustness to Label Noise in Text Classification via Noise Modeling • [Paper] [Code] [Video]   **CIKM 2021**
- Beyond Fine-tuning: Few-Sample Sentence Embedding Transfer • [Paper] [Video] [Slides]   **AACL-IJCNLP 2020**
- Can Adversarial Weight Perturbations Inject Neural Backdoors? • [Paper] [Code] [Video]   **CIKM 2020**
- Stochastic Bandits with Delayed Composite Anonymous Feedback • [Paper] [Poster]   **NeurIPS 2019 MLWG**

PAPERS UNDER SUBMISSION

- **Paragraph-based Transformer Pretraining for Multi-Sentence Inference**   **ARR**
  Luca Di Liello, *Siddhant Garg*, Luca Soldaini, Alessandro Moschitti
- **Pre-training Transformer Models with Sentence-Level Objectives for Answer Sentence Selection**   **ARR**
  Luca Di Liello, *Siddhant Garg*, Luca Soldaini, Alessandro Moschitti
- **Knowledge Transfer from Answer Reranking to Answer Generation**   **ARR**
  Matteo Gabburo, Rik Koncel-Kedziorski, *Siddhant Garg*, Alessandro Moschitti